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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/773,004	02/04/2004	Stephen W. Montgomery	42P17761	5370

8791 7590 09/20/2007  
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EXAMINER
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MCCRACKEN, DANIEL

ART UNIT	PAPER NUMBER
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1754

MAIL DATE	DELIVERY MODE
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09/20/2007

PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

## Office Action Summary

Application No.

10/773,004

Applicant(s)

MONTGOMERY ET AL.

Examiner

Daniel C. McCracken

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1754

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 25 June 2007.
- 2a) ☒ This action is **FINAL**.                      2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-10 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-10 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                       | 5) <input type="checkbox"/> Notice of Informal Patent Application                       |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

### DETAILED ACTION

Citation to the Specification will be in the following format (S. # : ¶) where # denotes the page number and ¶ denotes the paragraph number.

#### *Response to Arguments*

Applicant's arguments filed 6/25/2007 have been fully considered but they are not persuasive. With respect to the rejections under 35 U.S.C. 112, ¶1 the inquiry/analysis need go no further than the plain language of the statute:

The specification shall contain a written description of the invention, and of **the manner and process of making and using it**, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

35 U.S.C. 112, ¶1 (emphasis added). Applicants urge that Figs. 1-3 of the instant application provide ample guidance for one of ordinary skill in the art to practice the invention. If the periodic table of the elements was actually a set of “Tinkertoys®,” and “connecting atoms” was as simple as snapping pieces together, then yes, Figs. 1-3 would enable one of ordinary skill in the art as well as convey to one of ordinary skill that Applicants actually possessed the claimed invention. Regrettably, chemistry and Tinkertoys® are not the same thing.

The gravamen of both the written description and enablement rejections relates to the passage of §112 in bold typeface above. Applicants point out that working examples are not necessary, but the absence thereof is highly probative in cases like this where the guidance is so lacking. The Examiner has read Applicants' disclosure again and finds it devoid of any written guidance that details the “manner and process of making [the inventions].” 35 U.S.C. 112, ¶1. The Examiner has not found any passage in the specification related to the actual reagents used, process conditions (i.e. temperature, pressure, etc.), concentrations, chemical reactions, processes for purifying/isolating the product, etc. As drafted, there is but one mention of “chemistry” (that

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is, the manner and process of making the invention) at (S. 18: [0018]). Nanotube “opening reactions” reactions are admittedly old and known, and contribute nothing to the disclosure of the instant application. The Examiner does not consider “Figs. 1-3” to be “chemistry.” If the synthesis of connector molecule is readily apparent from these figures, the Examiner would welcome evidence in affidavit form (37 CFR 1.132) that details how making a “connector molecule” like “C<sub>19</sub>S<sub>6</sub>H<sub>24</sub>” is known in the art. Further, the Examiner would welcome affidavit evidence related to *how* one of ordinary skill in the art would take the “connector molecule” and “connect it” to the nanotube. Are the two connected with tweezers and Superglue under a high-power microscope? Do the two connect as Applicants urge, or in a different fashion? How is this ascertained? Is some sort of chemistry involved? *Any affidavits should, of course, be accompanied by remarks pointing out where this guidance is found in the specification.* If it is easier for Applicants than responding with appropriate affidavits, the Examiner *would welcome* a demonstration of this technology. Such a demonstration could *potentially* obviate the rejection under 35 U.S.C. 112. **To be clear, the Examiner is requesting experimental evidence or affidavits be submitted.** It was requested in the non-final office action and not provided. Attorney argument is not evidence. *See* MPEP 2145.

With respect to the rejection over Smalley, no difference is seen between the process recited by Smalley and that claimed by Applicants – *especially in light of the guidance provided in the Specification.* Nanotubes are connected into three-dimensional structures. (Smalley col. 13-14).

***Claim Rejections - 35 USC §§ 102, 112***

The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

**All rejections in the Non-final Office Action dated 3/22/2007 are expressly incorporated herein by reference.**

***Conclusion***

Patents are not granted for research plans. All amendments made in response to this Office Action must be accompanied by a pinpoint citation to the Specification (i.e. page and paragraph or line number) to indicate where Applicants are drawing their support.

**THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).


A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Daniel C. McCracken whose telephone number is (571) 272-6537. The examiner can normally be reached on Monday through Friday, 9 AM - 6 PM EST.


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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Stanley S. Silverman can be reached on (571) 272-1358. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.



Daniel C. McCracken  
Assistant Examiner  
DCM



Stuart L. Hendrickson  
Primary Examiner